

CLAIMS

1. A web-form laminated material used for packaging containers comprising at least a support layer and a thermoplastic innermost layer, in which

a conductive layer is laminated between the support layer and the thermoplastic innermost layer at zones where heat-sealing is conducted by high-frequency induction heating for forming the container so that the heat generated by the induction heating is conducted to the innermost layer and

the conductive layer is a thin film/formed layer substantially comprising a metallic conductive material.

2. A laminated material according to claim 1, wherein the conductive layer is a printed layer of a conductive composition containing a conductive filler substantially comprising a metallic conductive material.

3. A laminated material according to claim 1, wherein the conductive layer is a plating layer comprising a metallic conductive material.

4. A laminated material according to claim 1, wherein the conductive layer is a metal vapor deposited layer comprising a metallic conductive material disposed on a vapor deposited tape.

5. A laminated material according to claim 1, wherein the conductive layer is a metal vapor deposited layer comprising a metallic conductive material disposed on the inner surface of a substrate film of a vapor deposited film laminated between the support layer and the thermoplastic innermost layer.

6. A laminated material according to claim 1, wherein the conductive layer is a metal vapor deposited layer comprising a metallic conductive material disposed on the outer surface of a substrate film of a vapor deposited film laminated between the support layer and the thermoplastic innermost layer.

7. A process of producing a web-form laminated material used for packaging containers comprising at least a support layer and a thermoplastic innermost layer, which includes,

providing a plurality of material rolls for the support layer,

delivering web-form support layers successively from the material rolls, printing a conductive layer of a conductive composition containing a conductive filler to the inner surface of the support layer directly or indirectly at zones where heat-sealing is conducted by high-frequency induction heating for forming the container,

printing a container design indirectly or directly to the outer surface of the web-form support layer,

forming identical or different kind of single or multiple thermoplastic layers simultaneously or successively to the printed outer surface and inner surface of the web-form support layer, and then joining the top end of the web-form support layer at the upstream with the rear end of the web-form support layer at the downstream thereby forming a longer web-form support layer.

8. A method of producing a web-form laminated material used for packaging containers comprising at least a support layer and a thermoplastic innermost layer, which includes,

providing a plurality of material rolls for the support layer,
delivering web-form support layers successively from the material rolls, forming a plating layer comprising a metallic conductive material to the inner surface of the support layer at zones where heat-sealing is conducted by high frequency-induction heating for forming the container,

printing a container design indirectly or directly to the outer surface of the web-form support layer,

forming identical or different kind of single or multiple thermoplastic layers simultaneously or successively to the printed outer surface and inner surface of the web-form support layer, and

joining the top end of the web-form support layer at the upstream with the rear end of the web-form support layer at the downstream thereby forming a longer web-form support layer.

9. A method of producing a web-form laminated material used for packaging containers comprising at least a support layer and a thermoplastic innermost layer, which includes,

providing a plurality of material rolls for the support layer,
delivering web-form support layers successively from the material rolls, laminating an vapor deposited film comprising a substrate film and a metal vapor deposited layer of a metallic conductive material formed on the inner surface or the outer surface of the substrate film to the inner surface of the support layer including zones where heat-sealing is conducted by high-frequency induction heating for forming the container,

printing a container design indirectly or directly to the outer

surface of the long web-form support layer,

forming identical or different kind of single or multiple thermoplastic layers simultaneously or successively to the printed outer surface and inner surface of the web-form support layer, and

joining the top end of the web-form support layer at the upstream with the rear end of the web-form support layer at the downstream, thereby forming a longer web-form support layer.

10. A method of heat sealing a laminated material, which includes,

providing a web-form laminated material that is the laminated material used for packaging container comprising at least of a support layer and a thermoplastic layer, in which

a conductive layer is laminated between the support layer and the thermoplastic innermost layer at zones where heat-sealing is conducted by high-frequency induction heating for forming the container so that the heat generated by the induction heating is conducted to the innermost layer, and the conductive layer is a printed layer formed by printing a conductive composition containing a conductive filler or a plating layer comprising a metallic conductive material,

forming the web-form laminated material into a tubular shape and applying a longitudinal seal in the longitudinal direction,

filling the laminated material tube with a liquid foodstuff,

forming heat-sealing zones by the high-frequency induction heating every predetermined interval in the traversing direction of the filled tube, and

cutting the center of each sealing zone, thereby forming individual containers.

11. A packaging container formed of a laminated material comprising at least a support layer and a thermoplastic innermost layer in which

a conductive layer of a thin film/formed layer substantially comprising a metallic conductive material is formed at zones where heat-sealing is conducted by high-frequency induction heating for forming the container, the innermost layer is melted or softened by the heat generated by the induction heating to form a sealing zone with the opposing softened or melted innermost layer.